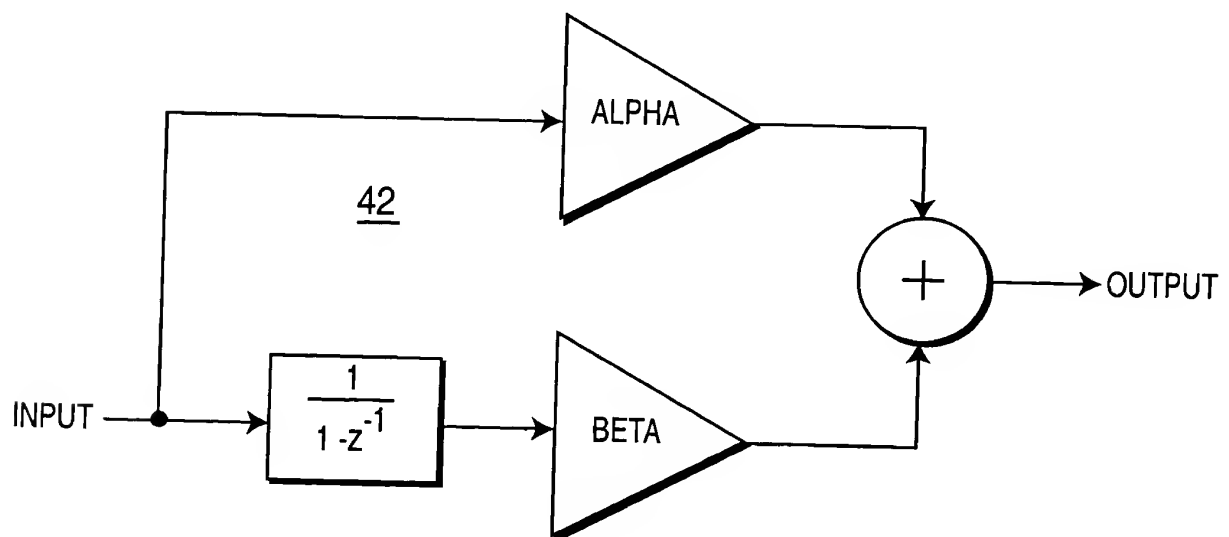PHASE ROTATION APPROACH FOR START_ UP AFC

FIG. 1

FIG. 3
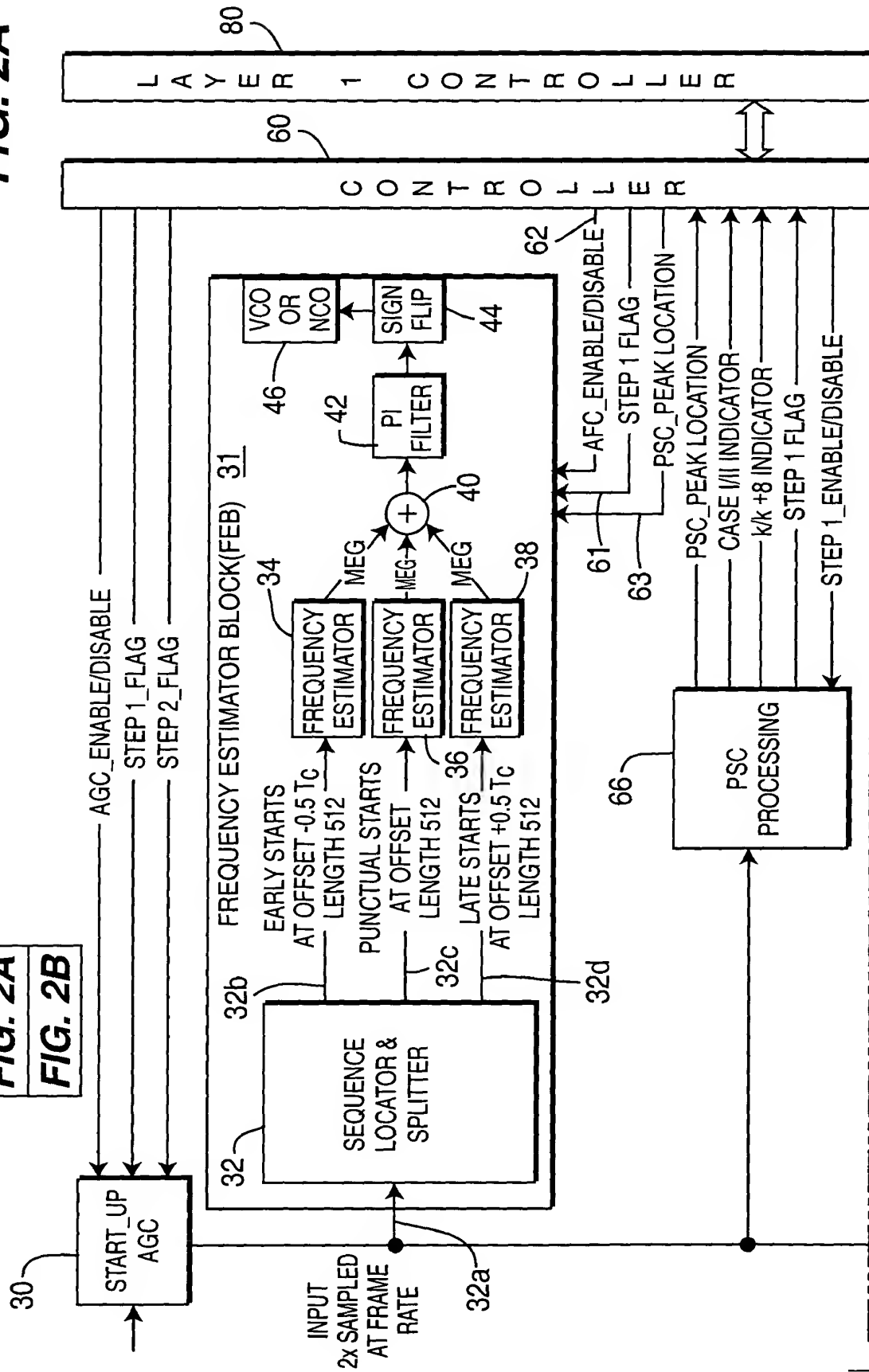
FIG. 2A

FIG. 2

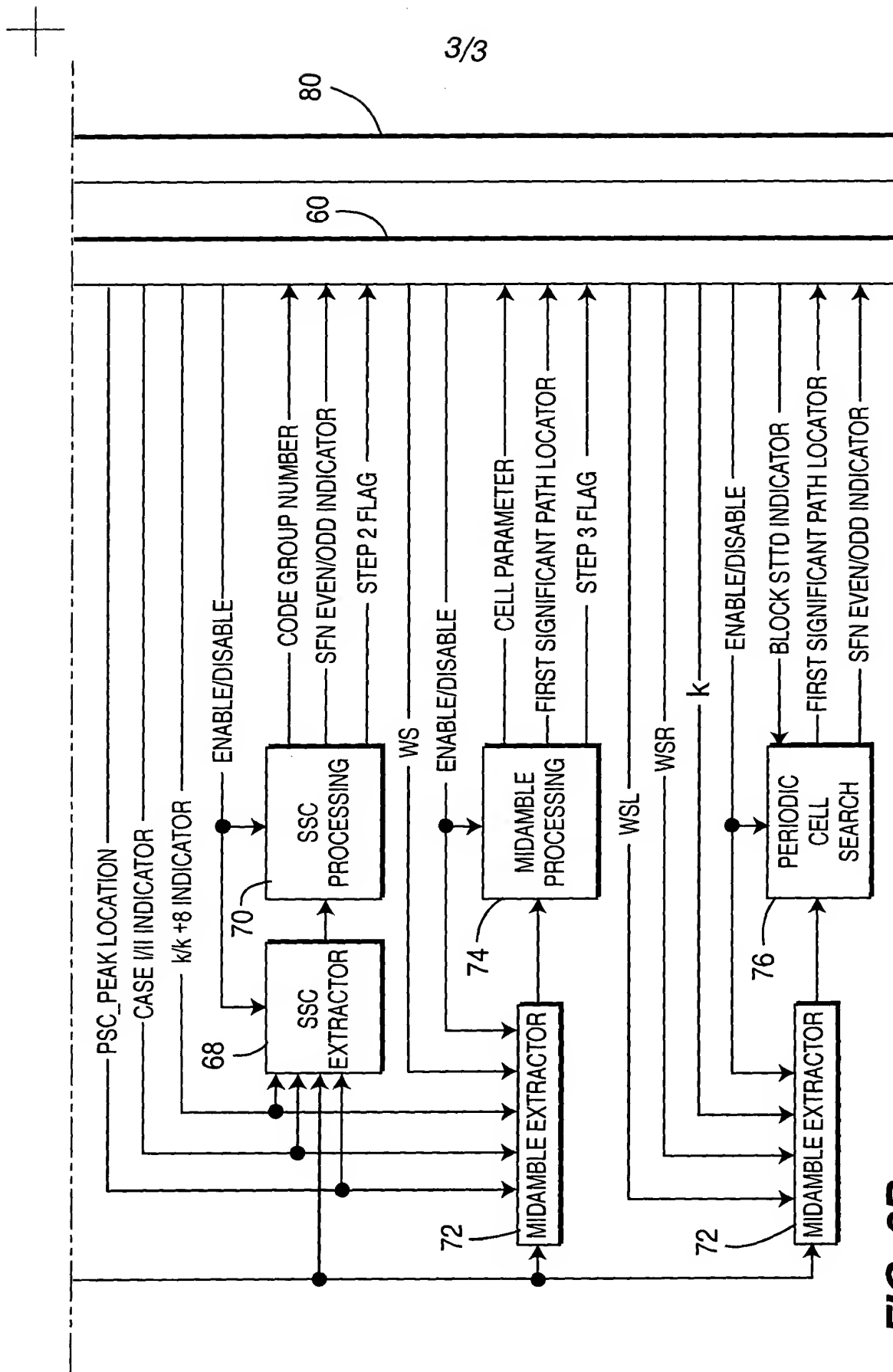| FIG. 2A |
|---------|
| FIG. 2B |

LAYER 1 CONTROLLER — 80

CONTROLLER — 60

FREQUENCY ESTIMATOR BLOCK(FEB) 31

SEQUENCE LOCATOR & SPLITTER — 32

INPUT 2x SAMPLED AT FRAME RATE — 32a

START_UP AGC — 30

AGC_ENABLE/DISABLE

STEP 1_FLAG

STEP 2_FLAG

EARLY STARTS AT OFFSET -0.5 Tc LENGTH 512 — 32b

PUNCTUAL STARTS AT OFFSET LENGTH 512 — 32c

LATE STARTS AT OFFSET +0.5 Tc LENGTH 512 — 32d

FREQUENCY ESTIMATOR — 34

FREQUENCY ESTIMATOR — 36

FREQUENCY ESTIMATOR — 38

MEG

40

PI FILTER — 42

VCO OR NCO — 46

SIGN FLIP — 44

62 — CONTROLLER

AFC_ENABLE/DISABLE

STEP 1 FLAG — 61

PSC_PEAK LOCATION — 63

PSC_PEAK LOCATION

CASE I/II INDICATOR

k/k +8 INDICATOR

STEP 1 FLAG

STEP 1_ENABLE/DISABLE

PSC PROCESSING — 66

FIG. 2B